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		LASSIFICATION		16. RESTRICTIVE M			
Unclassified							
2a. SECURITY CLASSIFICATION AUTHORITY				3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release;			
Zb. DECLASSIFICATION/DOWNGRADING SCHEDULE				distribution is unlimited.			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)				5. MONITORING ORGANIZATION REPORT NUMBERS)			
`i		NG ORGANIZATION	6b. OFFICE SYMBOL (If applicable)	78. NAME OF MONITORING ORGANIZATION			
Prir	ceton Uni	versity		Al	FOSR/NA		
6c. ADDRE	SS (City, State	and ZIP Code)		76. ADDRESS (City.	State and ZIP Cod	(e)	
Prir	nceton, N	J 08544		Bldg. 410, 20332-6		B, DC	
	OF FUNDING/	SPONSORING	86. OFFICE SYMBOL	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
	rization SR/NA		(If applicable) NA	AFOSR-88-0342			
Bc. ADDRESS (City, State and ZIP Code)				10. SOURCĘ OF FUNDING NOS.			
	ding 410			PROGRAM	PROJECT	TASK	WORK UNIT
Boll	ing AFB D	C 20332-6448		ELEMENT NO.	NO.	NO.	NO.
11. TITLE (Include Security Classification) (U) AFRAPT Trainee Program			61102F	2308	A2		
12. PERSOI	NAL AUTHOR						·
13a. TYPE	Prof. I.	GLASSMAN	OVERED	14. DATE OF REPO	AT (Yr., Mo., Dav	15. PAGE CO	DUNT
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22a. NAME	22a. NAME OF RESPONSIBLE INDIVIOUAL				22b. TELEPHONE NUMBER 22c. OFFICE SYMBOL		BOL
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EDITION OF 1 JAN 73 IS OBSOLETE.

## FINAL TECHNICAL REPORT

## Under

Air Force Systems Command Air Force Office of Scientific Research Contract No. AFOSR-85-0342

for the period

1 September 1988 to 31 August 1989



AFRAPT TRAINEE PROGRAM

Prepared by:

Irvin Glassman Robt. H. Goddard Professor AFRAPT Representative

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School of Engineering and Applied Science
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PRINCETON UNIVERSITY
Princeton, NJ 08544

During the grant period 1 September 1988 to 31 August 1989, three Air Force Research in Aero Propulsion Technology (AFRAPT) trainees were in residence in Princeton University's Department of Mechanical and Aerospace Engineering. Mr. Jeffery L. Emdee is supervised by Prof. I. Glassman and he is performing research on understanding the oxidation processes of aromatic components of JP fuels. His research is supported under an AFOSR contract. Mr. Emdee is continuing for another year to complete his Ph.D. studies. The summer of 1989 his industrial sponsor was the United Technologies Research Center.

Mr. Kenneth Whaling is supervised by Prof. P. Ronney and his research concerns are fuel flammability limits. The research program is supported by Prof. Ronney's Young Presidential Investigators Grant. His industrial internship during the summer of 1989 was spent at Pratt and Whitney, Florida.

Mr. Robert Lawson was supervised by Prof. F.L. Dryer and performed research on burning of heavy fuels and some of their residual components.

This effort was supported by EPRI. Mr. Lawson completed his M.S.E. thesis during the grant period and accepted a position with the Gas Turbine Division of the General Electric Company in Cincinnati.